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## Arctic Cat's Sno Pro Shown at Hay Days

Cat's new racer also uses driver forward, engine downward design cues.

9/9/2003

TOP STORY

Lino Lakes, MN, USA

Wade West



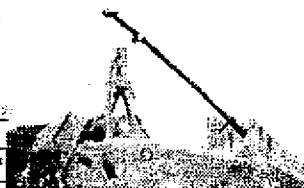
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**A**rctic Cat was the third factory to pull the covers off its race sled at Hay Days. Like the others, Cat's Sno Pro design also centers up the driver's positioning. But unlike the others, Cat also dropped the engine deeper into the chassis and bumped its output by about five ponies.

### A Centrist Mentality

We've all seen the early renderings of the new Cat chassis concept. The steering post is routed over the engine, delivering the handlebars farther forward on the sled. Cat engineers told us that they are eight inches closer to the nose of the sled and four inches higher than last year's racer.

To help the driver stay comfortably up front, Cat redesigned the cab area, bellypan and the seat. Much like the Ski-Doo REV, Team Arctic race engineers strived to make the Sno Pro a rider-integrated sled. "I spent a lot of time riding a REV last year," said



"Sno Pro Team Leader Troy Halvorson,"  
wanted to get to know it and then incorporate some of its concepts to  
the Sno Pro."

The engineering team didn't just stop with putting the driver in a forward stance. They also rolled the bulkhead back two degrees and rolled the engine even deeper into the belly of the sled. All in an effort to get as much mass as close to the center point as possible to provide an even better-balanced machine.

### Ergonomic Changes



In addition to the new riding position, the Sno Pro will have a new handlebar design for the coming season. The downward hooks have been clipped an inch shorter to better accommodate the Snocross track. "The longer hooks had their roots in ovals," said Halvorson. "The Snocross guys don't need them and they can hang up on the driver's body or clothing. So they got

shortened."

Also, Cat racers will notice that the tunnel has been changed significantly. Not only is it straight out the back, but it's deeper and is loaded up with very aggressive traction plates down the roll and on the flats. There are also no stirrups anymore. "With guys standing up in snocross, foot holds aren't necessary," explained Halvorson. "We put a very aggressive grip plate at that location and that should work well for our guys. It should also help reduce injuries that come from riders hanging up in a crash." Cat also added a larger bolster and grip plate at the middle of the running board for increased durability and traction.



### Improved Powerplant



The Suzuki 440 engine has been revamped with a handful of new design features. The airbox has been enlarged this year to get more air in to the engine. The new powerplant is estimated to churn out approximately 104 HP, which is about a five percent increase over the '03 Sno Pro. Accordingly, the cylinders feature a new three-port exhaust design to accommodate the added need to exhale. There's also a more spacious tuner wrapping over the top of the engine. That power is routed through the efficient Team roller secondary.

As the other guys have implemented, Cat has its own version of the "little red button". The Hot Start button has been lying in the Cat engineering vault since



1996, according to officials. The Hot Start goes an extra step beyond the Dragon system by incorporating a top limit on the pipe temperature to ensure it's at the best temperature for holeshots.

#### **Suspension Revisions**

The 2004 Sno Pro has had a number of changes to the front and rear suspensions for better cornering and durability. The sled will use Fox Zero-X on the AWS IV front end. The top shelf Fox units have both compression and rebound damping adjustments. The upper A-arm of the sled has been lengthened by .25 inches to give the retooled spindles less camber.



Under the tunnel, the Cross Link rear suspension has been fitted with a redesigned separator piston to better manage the oil flow between the two shocks. Also, the aluminum-bodied rear shock will allow rebound compression adjustment this year. A deeper, 1.7-inch lug track will spin around the strengthened rails to put the power to the snow.

#### **Other Useful Information**

The new seat is designed to wrap up over the five-gallon fuel tank. It also houses the electronics hub on the sled. If something should need attention, the seat comes off by pulling two bolts on the back and sliding it rearward.



The coolant bottle was relocated to the gas tank and seat area. Engineers just ran out of space to mount it, noted Halvorson. An added benefit is easy level assessment. A downside could be that it's tucked up under the steering column.

The handlebars come with a .88-inch riser plate as a standard feature. There is a 1.88-inch accessory riser available for the tall guys. Other accessories already available for the Sno Pro include the handguards and the number/sponsor plate that mounts behind the seat.

The Sno Pro will not ship with a tach or speedo this season. Halvorson explained that the sled is setup to readily accept a RacePak computer display to monitor not only the engine speed, but also jackshaft rpm and pipe temperature as well.



Finally, Cat made some changes to the chassis to give it more strength on the track. The straight tunnel is said to be much stronger than the ETT of last year. Also, the suspension rails are machined instead of the stamped units used on the '03. They are also braced better. The front end's side plates are stronger and have additional

strengthening welds.

Overall, the Sno Pro is said to be up a handful of factory pounds due to the additional bracing and larger, thicker airbox.

#### Final Analysis

Cat spent a lot of time revamping the rider ergonomics and handling of the 2004 Sno Pro. But its engineering team also spent some quality time in the engine and chassis durability department. Will it work out for the season? Only time will tell. We'll all have a better idea around Thanksgiving time, when the boys of winter hit the track at Duluth.



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